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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			EXAMINER CHANG, JULIAN	
			ART UNIT 2152	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/615,624

Applicant(s)

CHU ET AL.

Examiner

Julian Chang

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 71-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 01/21/05-03/05/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office action is responsive to communication filed on 07/09/07. Claims 1-74 are pending, of which, claims 1-70 have been examined below.

Election/Restrictions

2. Applicant's election without traverse of claims 1-70 in the reply filed on 07/09/07 is acknowledged.

Specification

3. The use of the trademark MICROSOFT WINDOWS XP has been noted in this application. It should be capitalized wherever it appears and be accompanied by the *generic terminology*.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Information Disclosure Statement

4. The information disclosure statement filed 03/05/07 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 27-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "The engine as recited..." is ambiguous because there are multiple engines claimed in the respective parent claim.

6. Claims 31-33 and 43-45 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "related extended" in claims 31-33 and 43-45 is a relative term which renders the claim indefinite. The term "related extended" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term renders the claimed "error information" indefinite..

The term "refine" in claim 33 is a relative term which renders the claim indefinite. The term "refine" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The term "improve" in claim 45 is a relative term which renders the claim indefinite. The term "improve" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 39-45 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed towards software encoded on a "modulated data signal". Since software encoded on a signal does not fall within the four statutory categories recited in section 101, the claims are unpatentable.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 27 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Lapinski (US 2003/00069947).

8. Regarding claim 27, Lipinski teaches an engine comprising:

a communicative coupling engine to verify a communicative coupling between a device and a network ('IN USE?', Fig. 2);

network settings engine to configure network settings, wherein the network settings include a network address ('GET DHCP NETWORK SETTINGS', Fig. 2);

a name resolution engine to associate a computing domain name with the network address ('ENTER DNS', Fig. 2); and

a service connection engine to communicate with a network service ('TEST NETWORK ACCESS', Fig. 2).

9. Regarding claim 38, Lipinski teaches a mode selector to switch between automatically connecting the device and the network and manual connecting the device and the network, wherein manual connecting includes manual entry of at least one network setting ('MANUAL SETUP?', Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-16, 18, 19, 23, 24, 26, 46-61, 63, 64 and 69 rejected under 35

U.S.C. 103(a) as being unpatentable over Lipinski, and further in view of Kaan, et al (US 2002/0065941), hereinafter "Kaan".

11. Regarding claim 1, Lipinski teaches a method comprising:

connecting a device to a network service in a plurality of stages (Fig. 2).

Lipinski does not teach displaying in real-time, a status for each of the plurality of stages; and if the status comprises an error status, further displaying in real-time, troubleshooting help.

However, Kaan teaches the display of real-time status and real-time troubleshooting help (Fig. 14; para. [0088]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a troubleshooting help in the connection system of Lipinski with motivation to aid a user in troubleshooting a connection.

12. Regarding claim 46, Lipinski teaches a method comprising:

dividing a task of connecting a device to a network or a network service into stages (Fig. 2);

selecting one of the stages ('TEST DHCP', Fig. 2);

attempting a technique for completing the selected stage ('TEST DHCP', Fig. 2);

if the technique is successful, then selecting a subsequent stage and attempting a technique to complete the subsequent stage ('SUCCESS?', Fig. 2); and

if the technique is not successful, then if more techniques are available then selecting and attempting another technique for the stage ('SUCCESS?', Fig. 2).

Lipinski does not teach displaying real-time status reports of the attempting and of a success or a failure of the technique; and displaying troubleshooting instructions if the technique is not successful and no more techniques are available.

However, Kaan teaches the display of real-time status and real-time troubleshooting help (Fig. 14; para. [0088]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a troubleshooting help in the connection system of Lipinski with motivation to aid a user in troubleshooting a connection.

13. Regarding claims 3 and 48, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including a communicative coupling stage between the device and a network (Lipinski: 'IN USE?', Fig. 2).

14. Regarding claims 4 and 49, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including a network settings stage for configuring one of a network protocol and a network address (Lipinski: 'GET DHCP NETWORK SETTINGS', Fig. 2).

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15. Regarding claims 5 and 50, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 4 and 49 above, including a network settings stage exists as an Internet Protocol (IP) settings stage and the network address exists as an IP address (Lipinski: Fig. 2).

16. Regarding claims 6 and 51, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 5 and 51 above, including one or more techniques are attempted for completing an IP settings stage including one of a dynamic host configuration protocol (DHCP) technique, a point-to-point protocol over Ethernet (PPPoE) technique, and a bootstrap protocol (BOOTP) technique (Lipinski: 'DHCP', Fig. 2)

17. Regarding claims 7 and 52, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 4 and 49 above, including a name resolution stage for associating the network address to a network domain name (Lipinski: 'NEED NAME SERVER?', Fig. 2).

18. Regarding claim 8 and 53, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 7 and 52 above, including that a name resolution stage exists as a domain name system (DNS) name resolution stage (Lipinski: 'ENTER DNS', Fig. 2).

19. Regarding claims 9 and 54, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including a service connection stage for confirming communication with the network service (Lipinski: 'TEST NETWORK ACCESS', Fig. 2).

20. Regarding claims 10 and 55, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including proceeding automatically between each of the multiple stages of connecting (Lipinski: para. [0023]).

21. Regarding claims 11 and 56, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including that real-time status includes a message describing one of the plurality of stages (Kaan: para. [0088]).

22. Regarding claims 12 and 57, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 11 and 56 above, including a message describing progress of a technique used to complete one of the plurality of stages (Kaan: paras [0072]-[0073]).

23. Regarding claims 13 and 58, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including a visual indicator of progress of one of the plurality of stages (Kaan: para. [0074]).

24. Regarding claims 14 and 59, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including a visual indicator of success or failure of one of the plurality of stages (Kaan: para. [0074]).

25. Regarding claims 15 and 60, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including troubleshooting help including instructions for completing one of the plurality of stages (Kaan: para. [0088]).

26. Regarding claims 16 and 61, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including the troubleshooting help including instructions for completing a technique used to complete one of the plurality of stages (Kaan: para. [0088]).

27. Regarding claims 18 and 63, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including troubleshooting help including an error log compiled during the connecting (Kaan: para. [0088]).

28. Regarding claims 19 and 64, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including troubleshooting help including a stage during the connecting at which a failure occurred (Kaan: Fig. 4).

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29. Regarding claims 23 and 47, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, including that a device connects to a network service over the Internet (Lipinski: para. [0002]).

30. Regarding claim 24, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 23, including a network settings stage for configuring one of a network protocol for the Internet and an Internet Protocol address (Lipinski: para. [0003]).

31. Regarding claim 26, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 1, including testing whether a communicative coupling exists between the device and the network (Lipinski: 'TEST NETWORK ACCESS', Fig. 2);

displaying a real-time status of the testing, wherein if the communicative coupling exists then displaying a first success indicator and if the communicative coupling does not exist then displaying both a first failure indicator and troubleshooting instructions for establishing the communicative coupling (Kaan: para. [0072]-[0074]; [0088]);

attempting a network settings detection, wherein if the network settings are successfully detected then displaying a second success indicator and if the communicative coupling does not exist then displaying both a second failure indicator and troubleshooting instructions for detecting the network settings (Kaan: para. [0072]-[0074]; [0088]);

attempting a domain name system name resolution, wherein if a domain name is successfully resolved then displaying a third success indicator and if the domain name is not resolved then displaying both a third failure indicator and troubleshooting instructions for resolving the domain name (Kaan: para. [0072]-[0074]; [0088]); and

attempting communication with a network service available on the network, wherein if a communication with the network service is successful then displaying a fourth success indicator and if the communication with the network service is not successful then displaying both a fourth failure indicator and troubleshooting instructions for communicating with the network service (Kaan: para. [0072]-[0074]; [0088]).

32. Regarding claim 69, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 23, including a network settings stage for configuring one of a network protocol for the Internet and an Internet Protocol address (Lipinski: para. [0003]).

33. Claims 2 and 68 rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan as applied to claims 1 and 46 above, and further in view of Xiong (US 6,958,996).

34. Regarding claims 2 and 68, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, but fails to teach a first technique to

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complete a stage of the plurality of stages and if the first technique fails, then automatically attempting one or more subsequent techniques to complete the stage.

However, Xiong teaches attempting one or more subsequent techniques when a first technique fails (Fig. 6 and 7).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a second technique as taught by Xiong with motivation to connect to a network when a first technique fails.

35. Claims 25 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan as applied to claims 24 and 69 above, and further in view of Xiong.

36. Regarding claims 25 and 70, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 24 above, but fails to teach that a dynamic host configuration protocol (DHCP) technique is attempted to complete the network settings stage and if the DHCP technique fails, then a point-to-point protocol over Ethernet (PPPoE) technique is automatically attempted to complete the network settings stage.

However, Xiong teaches attempting PPPoE after the failure of a DHCP attempt (Fig. 7).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a second technique as taught by Xiong with motivation to connect to a network when a first technique fails.

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Claims 17 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan as applied to claims 1 and 46 above, and further in view of Mustafa (US 2002/0059378).

37. Regarding claims 17 and 62, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46 above, but fails to teach troubleshooting help including a serial number of the device.

However, Mustafa teaches the use of a serial number for troubleshooting (claim 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a serial number for troubleshooting as taught by Mustafa with motivation to determine the hardware to support.

38. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski as applied to claim 27 above, and further in view of Yildiz (US 7,016,948).

39. Regarding claim 28, Lipinski teaches the invention substantially as claimed and described in claim 27 above, but fails to teach a quality of service module to test and record quality of service parameters in a network.

However, Yildiz teaches a quality of service module (col. 2, lines 25-45).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a quality of service module as taught by Yildiz with motivation to maintain a minimum level of service.

40. Claims 29, 34, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski as applied to claim 27 above, and further in view of Kaan.

41. Regarding claim 29, Lipinski teaches the invention substantially as claimed and described in claim 27 above, but fails to teach a help and troubleshooting engine to instructions in response to a connection failure.

However, Kaan teaches the display of real-time status and real-time troubleshooting help (Fig. 14; para. [0088]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a troubleshooting help in the connection system of Lipinski with motivation to aid a user in troubleshooting a connection.

42. Regarding claim 34, Lipinski teaches the invention substantially as claimed and described in claim 27 above, but fails to teach a user-interface engine to generate a user interface for displaying a status of the connecting the device to the network.

However, Kaan teaches a user-interface for displaying the status of connecting to a network (para. [0088]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a GUI for displaying the status as taught by Kaan with motivation to enable a user to know the progress of connecting to a network.

43. Regarding claim 37, Lipinski teaches the invention substantially as claimed and described in claim 34 above, including a user interface to display error information from an error logging engine (Kaan: para. [0088]).

44. Regarding claim 35, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 34 above, including a user interface to display one of help and troubleshooting instructions (Kaan: para. [0088]).

45. Claims 20-22, 36 and 65-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan as applied to claims 1, 34 and 46 above, and further in view of Yildiz.

46. Regarding claims 20 and 65, Lipinski-Kaan teaches the invention substantially as claimed and described in claims 1 and 46, but fails to teach a quality of service testing stage.

However, Yildiz teaches testing for quality of service (col. 2, lines 25-45).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to measure quality of service as taught by Yildiz with motivation to maintain a minimum level of service.

47. Regarding claims 21 and 66, Lipinski-Kaan-Yildiz teaches the invention substantially as claimed and described in claims 20 and 66, including troubleshooting includes quality of service information (Yildiz: col. 2, lines 25-45).

48. Regarding claims 22 and 67, Lipinski-Kaan-Yildiz teaches the invention substantially as claimed and described in claims 21 and 66 above, including that quality of service information including one of an upload bandwidth, a download bandwidth, a network data packet latency, a network data packet drop rate, and a network jitter value (Yildiz: 'jitter', col. 2, lines 25-45).

49. Regarding claim 36, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 34 above, but fails to teach a user interface to display quality of service information from a quality of service engine.

However, Yildiz teaches a user interface to display quality of service information from a quality of service engine (col. 8, lines 1-19).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a GUI for monitoring a quality of service as taught by Yildiz with motivation to allow a user to analyze a network graphically.

50. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan as applied to claim 27 above, and further in view of Ben-Natan, et al (US 5,790,779), hereinafter "Ben".

51. Regarding claim 30, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 27 above, but fails to teach an error logging engine to record errors during one or more connection attempts.

However, Ben teaches the aggregation of error logs (abstract).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to log errors as taught by Ben with motivation to allow a user to troubleshoot the problem.

52. Regarding claim 31, Lipinski-Kaan-Ben teaches the invention substantially as claimed and described in claim 30 above, including persisting a failure record and related extended error information of a failed connection stage for uploading to a service in response to a subsequent successful connection to a network (Ben: para. [0003], [0004], [0009]).

53. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan-Ben as applied to claim 30 above, and further in view of Skaaning, et al (US 6,535,865), hereinafter "Skaaning".

54. Regarding claim 32, Lipinski-Kaan-Ben teaches the invention substantially as claimed and described in claim 30 above, but fails to teach that failure record and related extended error information are uploaded for statistical treatment of multiple connection failures.

However, Skaaning teaches performing statistical analysis using Bayesian networks to troubleshoot errors (col. 5, lines 30-50).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use Bayesian networks for statistical analysis of errors as taught by Skaaning with motivation to troubleshoot more efficiently.

55. Regarding claim 33, Lipinski-Kaan-Ben teaches the invention substantially as claimed and described in claim 30 above, but fails to teach that failure record and related extended error information are uploaded for a Bayes network to refine a connection stage between the device and the network.

However, Skaaning teaches performing statistical analysis using Bayesian networks to troubleshoot errors (col. 5, lines 30-50).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use Bayesian networks for statistical analysis of errors as taught by Skaaning with motivation to troubleshoot more efficiently.

56. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski, and further in view of Xiong.

57. Regarding claim 39, Lipinski teaches instructions for a method comprising:
verifying a communicative coupling between a device and a network ('IN USE?', Fig. 2);
if the communicative coupling is verified, then obtaining an IP address using the communicative coupling ('GET DHCP NETWORK SETTINGS', Fig. 2);
if an IP address is obtained, then querying a domain name system (DNS) to resolve a domain name ('ENTER DNS', Fig. 2); and
if the domain name is resolved, then attempting communication with an online service using the IP address or the domain name ('TEST NETWORK ACCESS', Fig. 2).

Lipinski fails to teach that a dynamic host configuration protocol (DHCP) technique is attempted to complete the network settings stage and if the DHCP technique fails, then a point-to-point protocol over Ethernet (PPPoE) technique is automatically attempted to complete the network settings stage.

However, Xiong teaches attempting PPPoE after the failure of a DHCP attempt (Fig. 7).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a second technique as taught by Xiong with motivation to connect to a network when a first technique fails.

58. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Xiong as applied to claim 39 above, and further in view of Yildiz.

59. Regarding claim 40, Lipinski-Xiong teaches the invention substantially as claimed and described in claim 39 above, but fails to teach testing quality of service parameters between the device and the online service.

However, Yildiz teaches monitoring a quality of service (col. 2, lines 25-45).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a quality of service module as taught by Yildiz with motivation to maintain a minimum level of service.

60. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Xiong as applied to claim 40 above, and further in view of Kaan.

61. Regarding claim 41, Lipinski-Xiong teaches the invention substantially as claimed and described in claim 40 above, but fails to teach indicating in real-time one or more statuses of a connecting process between the device and the network, including a status for each of the verifying a communicative coupling, the obtaining an IP address, the querying a DNS, the attempting communication with an online service, and the testing quality of service parameters.

However, Kaan teaches the display of real-time status and real-time troubleshooting help (Fig. 14; para. [0088]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a troubleshooting help with motivation to aid a user in troubleshooting a connection.

62. Regarding claim 42, Lipinski-Xiong-Kaan teaches the invention substantially as claimed and described in claim 41 above, including displaying troubleshooting instructions associated with a part of the method whenever the part of the method is not automatically completed (Kaan: para. [0088]).

63. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan-Xiong as applied to claim 39 above, and further in view of Ben.

64. Regarding claim 43, Lipinski-Kaan teaches the invention substantially as claimed and described in claim 39 above, but fails to teach storing a failure record and related extended error information with respect to failures in the connection stages of verifying a communicative coupling, obtaining an IP address, querying a domain name system, and attempting communication with an online service.

However, Ben teaches the aggregation of error logs (abstract).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to log errors as taught by Ben with motivation to allow a user to troubleshoot the problem.

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65. Regarding claim 44, Lipinski-Kaan-Xiong-Ben teaches the invention substantially as claimed and described in claim 43 above, including uploading the failure record and related extended error information in response to a subsequent successful connection to a network (Ben: para. [0003], [0004], [0009]).

66. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipinski-Kaan-Ben as applied to claim 44 above, and further in view of Skaaning.

67. Regarding claim 45, Lipinski-Kaan-Ben teaches the invention substantially as claimed and described in claim 44 above, but fails to teach that failure record and related extended error information is used in a Bayes network to improve at least one of the connection stages.

However, Skaaning teaches performing statistical analysis using Bayesian networks to troubleshoot errors (col. 5, lines 30-50).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use Bayesian networks for statistical analysis of errors as taught by Skaaning with motivation to troubleshoot more efficiently.

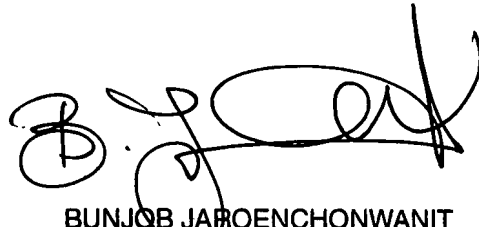
Conclusion

68. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Chang whose telephone number is (571) 272-8631. The examiner can normally be reached on Monday thru Friday 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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